



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,677	01/29/2004	Paul-Heinz Jeppel	2002P06700US	5428
7590	09/20/2005		EXAMINER	
SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPT. 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			KIM, TAE JUN	
			ART UNIT	PAPER NUMBER
			3746	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/767,677 Examiner Ted Kim	JEPPEL ET AL. Art Unit 3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 29 January 2004.  
 2a) This action is FINAL.                  2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-20 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>01/29/2004</u>	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Claim Objections*

1. Claim 17 is objected to because of the following informalities: the specification does not specifically state the fasteners are bolts but rather screws. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 8-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. For claim 9, the specification does not enable each liner to be simultaneously attached to both walls.

“a first temperature resistant liner *attached* to the outer side of the first portion of the inner wall and attached to [ should be --positioned on--] the inner side of the first portion of the outer wall;

a second temperature resistant liner *attached* to the outer side of the second portion of the inner wall and attached to [ should be --positioned on--] the inner side of the second portion of the outer wall.”

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10, 11, 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 10, “the first portion” does not identify which of the two first portions previously set forth in claim 9 is referred to.
- Claim 11, the second portions” does not identify which of the two second portions previously set forth in claim 9 is referred to.
- Claim 19, “the heat shield” lacks proper antecedent basis.

#### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3-17, 19, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 19809568 of the IDS. DE ‘568 teaches a combustion chamber for a gas turbine comprising: an annular combustion chamber inner wall 3 and an annular combustion chamber outer wall 2 defining an annular combustion space; a 1<sup>st</sup> lining 25 formed from a plurality of heat shield elements arranged on an interior of the outer wall defining a first

inner space between the heat shield element and the outer wall; a 2<sup>nd</sup> lining 25, 27, 28 formed form a plurality of heat shield elements arranged on an exterior of the inner wall defining a second inner space between the heat shield element and the inner wall; a cooling medium adapted to flow within the 1<sup>st</sup> inner space and 2<sup>nd</sup> inner space, wherein the inner wall comprises a plurality of wall elements abutting each other at a horizontal parting joint, said wall elements being connected to each other in the area of the parting joint by means of a plurality of screw connections 23 oriented at an angle to the inner wall surface; a cooling medium supply line is connected to a plurality of cooling medium exit openings via a cooling medium distributor 34 (see Fig. 2); wherein the cooling medium exit openings appear dimensioned such that the sum total of the cross-sectional areas of all the cooling medium exit openings of a cooling medium distributor is less than the cross-sectional area of the assigned cooling medium supply line 31; wherein the 1<sup>st</sup> inner space is connected to a cooling medium discharge system via a plurality of holes; the heat shield elements are fixed to the combustion chamber inner wall or to the combustion chamber outer wall via a tongue and groove system. The combustor comprises an outer wall 2 having an inner side and outer side and a 1<sup>st</sup> portion and 2<sup>nd</sup> portion; an inner wall 3 having an inner side and outer side and a 1<sup>st</sup> portion and 2<sup>nd</sup> portion; a 1<sup>st</sup> temperature resistant liner 25 attached to the outer side of the 1<sup>st</sup> portion of the inner wall and attached to the inner side of the 1<sup>st</sup> portion of the outer wall; a 2<sup>nd</sup> temperature resistant liner 25, 27, 28 attached to the outer side of the 2<sup>nd</sup> portion of the inner wall and attached to the inner side of the 2<sup>nd</sup> portion of the outer wall; and a

plurality of fasteners 23 adapted to removably connect the 1<sup>st</sup> and 2<sup>nd</sup> portions of the inner wall. The 1<sup>st</sup> portion is an upper half; the 2<sup>nd</sup> portion is a lower half; the liner is formed from a plurality of heat shield elements; the fasteners are inter-engaging elements oriented at an angle to the outer surface of the inner wall. Note that the claim limitation “at an angle to the outer surface of the inner wall” doesn’t specify in which plane the where the angle is measured from nor what part of the outer surface of the inner wall is taken for the reference.

8. Claims 1, 3-17, 19, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Maclin (4,480,436). Maclin teaches a combustion chamber for a gas turbine comprising: an annular combustion chamber inner wall and an annular combustion chamber outer wall defining an annular combustion space 15; a 1<sup>st</sup> lining 32 formed from a plurality of heat shield elements arranged on an interior of the outer wall defining a first inner space between the heat shield element and the outer wall; a 2<sup>nd</sup> lining 32 formed from a plurality of heat shield elements arranged on an exterior of the inner wall defining a second inner space between the heat shield element and the inner wall; a cooling medium adapted to flow within the 1<sup>st</sup> inner space and 2<sup>nd</sup> inner space, wherein the inner wall comprises a plurality of wall elements 32 abutting each other at a horizontal parting joint (see Fig. 3 for the outer wall and note the inner wall is analogous), said wall elements being connected to each other in the area of the parting joint by means of a plurality of screw connections 22 oriented at an angle to the inner wall surface; a cooling medium supply line is connected to a plurality of cooling medium exit openings 30 via a cooling

medium distributor; wherein the cooling medium exit openings are dimensioned such that the sum total of the cross-sectional areas of all the cooling medium exit openings of a cooling medium distributor appear less than the cross-sectional area of the assigned cooling medium supply line; wherein the 1<sup>st</sup> inner space is connected to a cooling medium discharge system via a plurality of holes; the heat shield elements are fixed to the combustion chamber inner wall or to the combustion chamber outer wall via a tongue and groove system. A combustion chamber having an outer wall having an inner side and outer side and a 1<sup>st</sup> portion and 2<sup>nd</sup> portion; an inner wall having an inner side and outer side and a 1<sup>st</sup> portion and 2<sup>nd</sup> portion; a 1<sup>st</sup> temperature resistant liner 32 attached to the outer side of the 1<sup>st</sup> portion of the inner wall and attached to the inner side of the 1<sup>st</sup> portion of the outer wall; a 2<sup>nd</sup> temperature resistant liner 32 attached to the outer side of the 2<sup>nd</sup> portion of the inner wall and attached to the inner side of the 2<sup>nd</sup> portion of the outer wall; and a plurality of fasteners adapted to removably connect the 1<sup>st</sup> and 2<sup>nd</sup> portions of the inner wall. The 1<sup>st</sup> portion is an upper half; the 2<sup>nd</sup> portion is a lower half; the liner is formed from a plurality of heat shield elements 32; the fasteners are inter-engaging elements oriented at an angle to the outer surface of the inner wall. Note that the claim limitation "at an angle to the outer surface of the inner wall" doesn't specify in which plane the where the angle is measured from nor what part of the outer surface of the inner wall is taken for the reference.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of the above art in view of either Matyscak (5,387,082) or Wakeman et al (4,555,901).

The above applied art do not teach a feather key for a corresponding screw connection.

Matyscak teach a circular wall 2 joined by a feather key 23 for allowing a sealing connection with thermal expansion. Wakeman et al teach a circular wall with a feather key 48 (Figs. 4, 5) for allowing a sealing connection with thermal expansion. It would have been obvious to one of ordinary skill in the art to employ a feather key for a corresponding screw connection, to allow for a sealing connection for the circular wall.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over either of the above applied art. The above prior art appear to teach the cooling medium exit openings are dimensioned such that the sum total of the cross-sectional areas of all the cooling medium exit openings of a cooling medium distributor is less than the cross-sectional area of the assigned cooling medium supply line. In order to obviate any doubt, this is old and well known in the art as an obvious matter of relative sizing of the openings and would have been obvious to do to ensure adequate inflow of cooling air.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 571-272-4829. The Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.

The fax numbers for the organization where this application is assigned are 571-273-8300 for Regular faxes and 571-273-8300 for After Final faxes.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe, can be reached at 571-272-4444.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of Technology Center 3700, whose telephone number is 703-308-0861. General inquiries can also be directed to the Patents Assistance Center whose telephone number is 800-786-9199. Furthermore, a variety of online resources are available at <http://www.uspto.gov/main/patents.htm>



---

Ted Kim	Telephone	571-272-4829
Primary Examiner	Fax (Regular)	571-273-8300
September 13, 2005	Fax (After Final)	571-273-8300
Technology Center 3700 Receptionist	Telephone	703-308-0861
Patents Assistance Center	Telephone	800-786-9199